

PROJECT DESCRIPTION

I. GENERAL

This portion of the project involves the installation of a new traffic control signal at the intersection of MD 103 and Long Gate Center entrance in Howard County, Maryland. MD 103 is considered to run in an east/west direction.

II. INTERSECTION OPERATION

The intersection is to operate in NEMA four (4) phase, full-traffic-actuated mode. There will be an exclusive/permissive left turn phase for the westbound movement of MD 103. The MD 103 through movements will operate concurrently. The Long Gate Center entrance will operate alone.

An eight phase, full-traffic-actuated, solid state digital controller with intersection monitor and harness, battery back-up, and four two-channel time delay output loop detector amplifiers housed in a base mounted cabinet are to be installed at this location.

EQUIPMENT LIST

A. Approved S.H.A. equipment to be purchased by the Developer and installed by the Contractor. All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	Specification Section	Description
1	EA	818	27 ft. steel mast arm pole with 70 ft. mast arm [Note: four 2 in. anchor bolts].
1	EA	816	Standard S.H.A. traffic signal controller, base mounted cabinet, and four 2-channel loop detector amplifiers. [Note: Controller and cabinet shall be supplied by Econolite and delivered to the S.H.A. signal shop for wiring and testing. Contact Mr. Ed Rodenhizer (410) 787-7650].
1	EA	814	12 in., one-way, two section (R,R) adjustable traffic signal head with mast arm mounting hardware and tunnel visors.
1	EA	814	12 in., one-way, two section (R,R) adjustable traffic signal head with pole mounting hardware and tunnel visors.
5	EA	814	12 in., one-way, three section (R,Y,G) adjustable traffic signal head with mast arm mounting hardware and tunnel visors.
1	EA	814	12 in., one-way, five section (R,Y,YA,G,GA) adjustable traffic signal head with mast arm mounting hardware and tunnel visors.
10.5	SF	813	36 in. x 42 in. R 10-12 sign with mast arm mounting hardware.
15	SF	813	30 in. x 36 in. R 3-5(L) sign with mast arm mounting hardware.
32	SF	813	48 in. x 48 in. W 3-3 "NEW" sign for ground mounting.

B. Equipment to be furnished and installed by the Contractor. All equipment in this list shall have catalog cuts submitted for approval prior to installation.

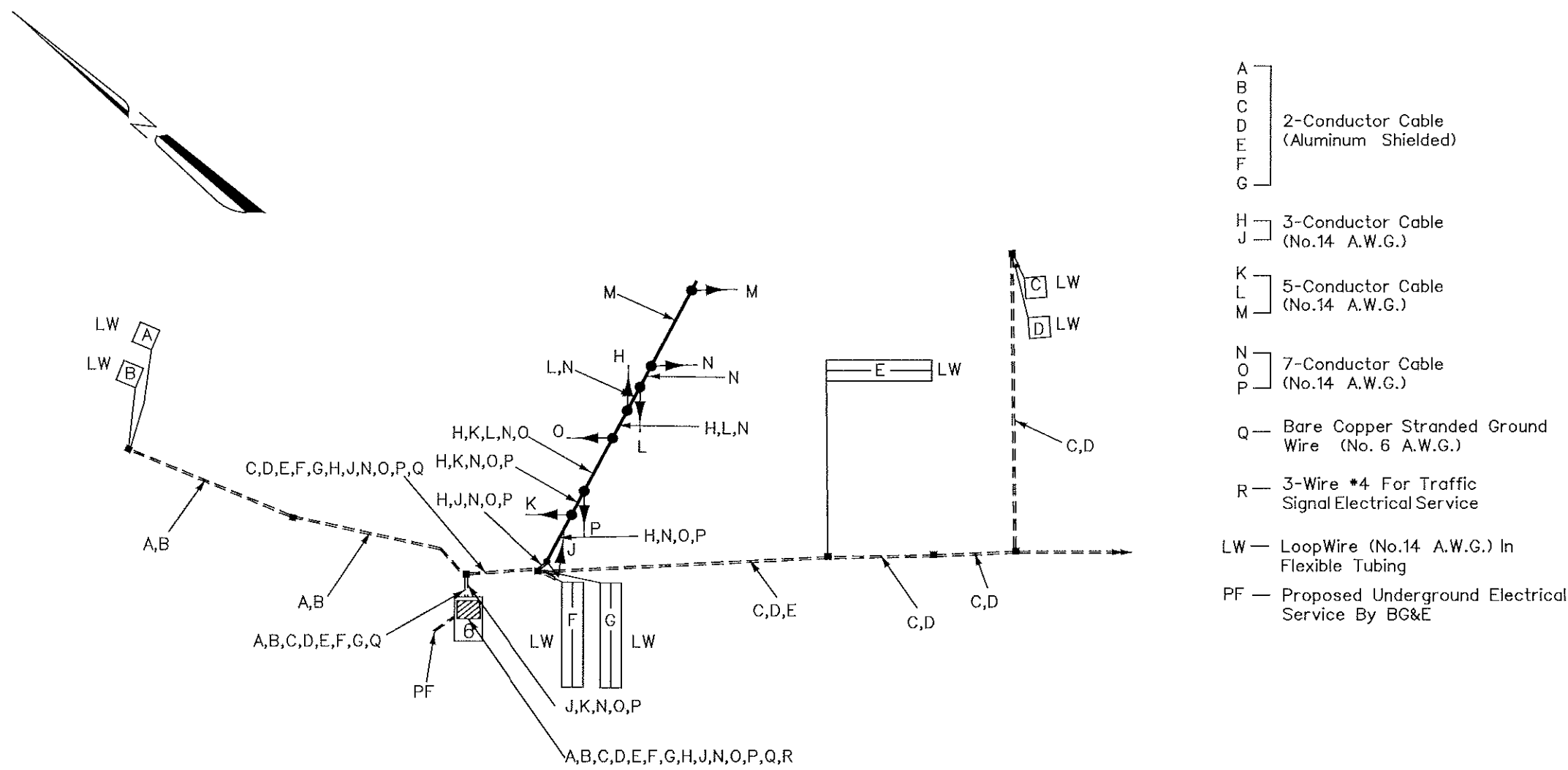
Quantity	Units	Specification Section	Description
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
2	CY	205	Test pit excavation.
8	EA	811	Handhole.
530	LF	815	Sawcut for signal loop detector.
1400	LF	810	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing.
2110	LF	810	2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).
270	LF	810	3-conductor electrical cable (No. 14 A.W.G.).
85	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
550	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
10	LF	810	3-wire (No. 4 A.W.G.) electrical cable.
100	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
35	LF	805	1 in. liquid tight flexible non-metallic conduit for loop detector sleeve.
1075	LF	805	2 in. polyvinyl chloride [Schedule 40] electrical conduit - trenched.
90	LF	805	2 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
90	LF	805	2 in. polyvinyl chloride [Schedule 80] electrical conduit - pushed.
70	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - pushed.
15	LF	805	4 in. polyvinyl chloride [Schedule 40] electrical conduit - trenched.
6.65	CY	801	Concrete foundation for traffic signal equipment.
2	EA	804	Ground rod - 3/4 in. diameter x 10 ft. length.
1	EA	807	Control and distribution equipment (120/240 V, one phase, three wire system) for a type B-5 underground electrical service.
135	LF	555	24 in. wide pavement marking - white for stop line
64	LF	812	4 in. x 6 in. wood sign support
1	EA	---	Cut, clean, and cap mast arm pole.
1.5	LS	---	As-built for S.H.A.

FHWA REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	MD			

Phase Chart

	1	2	3	4	5	6	7	8
	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)
Phase 2 & 5	R	R	G	G	R	R	FL/R	FL/R
5 Change	G	R	G	G	R	R	FL/R	FL/R
Phase 2 & 6	G	G	G	G	R	R	FL/R	FL/R
2 & 6 Change	Y	Y	Y	Y	R	R	FL/R	FL/R
Phase 4	R	R	R	R	G	G	FL/R	FL/R
4 Change	R	R	R	R	Y	Y	FL/R	FL/R
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R

Wiring Diagram



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MDOT - STATE HIGHWAY ADMINISTRATION

Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION

DRAWN BY: M.A. Mears
DES. BY: M.A. Mears
CHK. BY: Bruce Thompson 8-9-96

(General Information)

MD 103 at Long Gate Center Entrance

COUNTY: HOWARD

LOG MILE • 130103005.64

DATE: August 5, 1996
SCALE: N/A

F.A.P. NO. N/A
S.H.A. NO. BW907M81

TS/STD. NO. 3604-GI

SHEET NO. 2 of 2